What is claimed is:

1. A fiber bundle comprising a plurality of fibers attached to each other in a fixed position with respect to each other wherein the fibers have different molecules of interest immobilized in or on different fibers.

2. The fiber bundle according to claim 1 comprising at least 100 different fibers.

3. The fiber bundle according to claim 1 wherein the molecule of interest is selected from the group consisting of a microorganism, ligand, antibody, antigen, nucleic acid, polysaccharide, receptor, plant or animal cells, organelles and fractions thereof.

4. The fiber bundle according to claim 1 further comprising a plurality of solid phases immobilizing said molecules of interest wherein said solid phase is immobilized in or on the fibers.

5. The fiber bundle according to claim 4 wherein said solid phases are particles or thread like structures embedded in the fibers.

6. The fiber bundle according to claim 1 wherein all or most of the fibers contain a different immobilized molecule of interest.

7. The fiber bundle according to claim 1 wherein at least one of the fibers contains a dye.

8. The fiber bundle according to claim 1 wherein different fibers contain different concentrations of the molecule of interest.

9. The fiber bundle according to claim 1 wherein each fiber contains no more than one immobilized molecule of interest.

10. A method of forming the bundle of claim 1 comprising

a) immobilizing different molecules of interest in or on different fibers,

b) aligning the fibers in a fiber bundle, and

c) fixing the arrangement of fibers in the fiber bundle.

11. The method of claim 10 wherein said immobilizing comprising mixing a molecule of interest in a liquid and solidifying the liquid to form a fiber.

12. The method of claim 11 wherein a liquid mixture of the molecule of interest is cast into a fiber.

13. The method of claim 11 wherein the liquid contains a polymer gelling material.

14 The method of claim 11 wherein the liquid contains a polymerizable monomer.

15. The method of claim 10 wherein said immobilizing comprising immobilizing a molecule of interest to a preformed fiber.

16. A method for making an array comprising forming the fiber bundle of claim 1 and cutting the fiber bundle transversely or at an angle to form a section such that the fixed position with respect to each other is maintained.

17. The method of claim 16 further comprising mounting said section to a solid support to form an array.

18. The method of claim 16 wherein said sections are less than 1 cm thick.

19. An array comprising a plurality of cells in a known location on the array, each cell containing a molecule of interest immobilized in or on at least a portion of a fiber, wherein different cells contain different fibers or portions of a fiber which contains a different molecule of interest immobilized therein or thereon, and wherein each molecule of interest is located in a known cell.

20. The array of claim 19 wherein the array contains portions of each fiber prepared by cutting a section from said fiber.

21. The array of claim 20 wherein the cells each contain one well or channel.

22. An array prepared by the method of claim 16.

23. An array prepared by the method of claim 17.

24. An array prepared by the method of claim 18.

25. A binding assay for detecting an analyte in a sample wherein said analyte binds to at least one molecule of interest in an array comprising;

contacting a sample suspected of containing an analyte with the array of claim 19 under conditions permitting the binding of analyte to molecule of interest,

detecting the presence or absence of binding between analyte and each cell in the array, and

determining the presence or absence of the analyte by the presence of any binding being detected at a predetermined cell of the array.

26. The binding assay of claim 25, further comprising;

adding a labeled detection agent capable of binding to cells having either analyte bound to molecule of interest or cells not having the analyte so bound, but not both, and

detecting the presence of the labeled detection agent in one or more cells of the array.

27. A binding assay for detecting an analyte in a sample wherein said analyte binds to at least one molecule of interest in an array comprising;

contacting a sample suspected of containing an analyte with the array of claim 22 under conditions permitting the binding of analyte to molecule of interest,

detecting the presence or absence of binding between analyte and each cell in the array, and

determining the presence or absence of the analyte by the presence of any binding being detected at a predetermined cell of the array.

28. The binding assay of claim 27, further comprising

adding a labeled detection agent capable of binding to cells having either analyte bound to molecule of interest or cells not having the analyte so bound, but not both, and

detecting the presence of the labeled detection agent in one or more cells of the array.

29. A method of determining whether the fibers in the bundle of claim 1 are properly aligned comprising illuminating fibers individually at one end of the bundle and photoelectrically identifying the location of a signal at the other end of the bundle.

30. A microarray comprising a solid phase support and at least about 500 cells per square centimeter wherein each cell contains a molecule of interest which is not chemically bound to the solid phase support.

31. The microarray of claim 30 containing at least about 1,000 cells per square centimeter.

32. A microarray comprising a solid phase support and at least about 500 cells per square centimeter wherein each cell contains a molecule of interest which is a macromolecule, a microorganism, a plant or animal cell, an organelle or a fraction of a biological cell.

33. The microarray of claim 32 containing at least about 1,000 cells per square centimeter.

34. A microarray comprising a solid phase support and at least about 500 cells per square centimeter wherein each cell contains a molecule of interest which was synthesized prior to contacting the solid phase support.

35. The microarray of claim 34 containing at least about 1,000 cells per square centimeter.

36. A microarray comprising a solid phase support and at least about 500 different cells per square centimeter wherein each cell is formed by a solid material adhered to said solid phase support wherein each solid material contains a molecule of interest.

37. The microarray of claim 36 containing at least about 1,000 cells per square centimeter.

38. A multiwell plate containing at least about 500 wells per square centimeter.

39. The multiwell plate of claim 38 wherein walls of the wells are made of a heterologous material from a base of the well.

40. A thin elongated fiber impregnated with a solid phase wherein the solid phase is bound to a molecule of interest.

41. An solid phase construct containing an immobilized molecule of interest comprising an embedding medium, a porous or hollow solid phase and a molecule of interest,

wherein the molecule of interest is immobilized on inside surfaces of the porous or hollow solid phase,

wherein the porous or hollow solid phase is embedded in the embedding medium, and

wherein the inside surfaces are exposed to the surface of the construct by cleaving such that individual porous or hollow solid phases are cleaved in plural sections.

42. A microarray containing a plurality of different cells wherein each cell contains a solid phase support, a porous particle containing a molecule of interest immobilized on an inside surface of a porous particle and a medium for attaching said particle to said solid phase support in a particular cell.

43. The microarray of claim 42 wherein the porous particle has been cleaved to expose molecules of interest on inner surfaces of the porous particle.

44. An elongated fiber having a molecule of interest immobilized thereon or therein such that a detectable number of a single molecule of interest are present in each millimeter of fiber length.

45. A cross-section of the fiber of claim 44 containing a detectable number of the molecule of interest.

46. A fibrous structure comprising;

at least two fibers of claim 44 being fixed in parallel juxtaposition to each other, and

at least two molecules of interest being immobilized in or on the fibers, wherein each fiber contains a different molecule of interest.

47. The fibrous structure of claim 46 wherein each of said at least two fibers contains one but not the other molecule of interest.

48. The fibrous structure of claim 46 wherein at least 10 different fibers are present.

49. The fibrous structure of claim 48 wherein each fiber contains only one molecule of interest, being substantially free of other molecules of interest.

50. The fibrous structure of claim 46 wherein each fiber contains a mixture of plural molecules of interest and each fiber contains a different